

CLAIMS

We claim:

1. A system for providing a programming signal containing a program and at least one address identifying online content relating to the program from an online

5 information source, the system comprising:

a first transmitter, wherein the transmitter transmits the program to a user site; and

a second transmitter, wherein the second transmitter transmits the address to the user site,

wherein, at some time after receipt of the address at the user site, the online content is automatically retrieved and presented to a user at the user site in conjunction with the program.

2. A system as described in claim 1, wherein the first transmitter and the second transmitter are co-located in the same facility.

3. A system as described in claim 2, wherein the first transmitter and the second transmitter are co-located at a Web hosting site.

4. A system as described in claim 1, wherein the first transmitter and the second transmitter are located in separate locations.

5. A system as described in claim 4, wherein the second transmitter is located at a Web hosting site.

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6. A system as described in claim 1, wherein the address is transmitted during the transmission of the program.

7. A system as described in claim 1, wherein the address is transmitted prior to the transmission of the program.

8. A system as described in claim 1, wherein the address is transmitted at a predetermined time during the transmission of the program.

9. A system as described in claim 1, wherein the second transmitter transmits a plurality of addresses.

10. A system as described in claim 9, wherein each of the plurality of addresses is transmitted at certain predetermined times during the program.

11. A system as described in claim 1, wherein the first transmitter is located at one of the sites selected from the group consisting of: a cable head-end, a program operations center, a satellite operations center, an Internet site, an intranet site, a private network site, and a public network site.

12. A system as described in claim 1, wherein the second transmitter is located at one of the sites selected from the group consisting of: a cable head-end, a program operations center, a satellite operations center, an Internet site, an intranet site, a private network site, and a public network site.

13. A system as described in claim 1, wherein the programming signal is transmitted via at least one transmission medium selected from the group consisting of: the Internet, an intranet, terrestrial broadcast, cable, satellite broadcast, fiber optics, a telephone circuit, a wireless connection, a private network, and a public network.

5 14. A system as described in claim 1, further comprising a recording medium, wherein the program is a previously recorded program stored on the recording medium, and the first transmitter receives the program from the recording medium.

15. A system as described in claim 14, wherein the recording medium is at least one selected from the group consisting of: VHS tape, compact disc, digital versatile disc, magnetic tape, computer hard drive, random access memory, read only memory, CD ROM, a magnetic data storage medium, and an optical data storage medium.

16. A system as described in claim 1, wherein the program is transmitted as a live event.

17. A system as described in claim 1, wherein the program comprises at least one form selected from the group consisting of: audio, video, data, graphics, animation, text, video stills, slow frame video, and multimedia.

18. A system as described in claim 1, wherein the address is an Internet URL, the URL identifying the online information source which is an Internet site.

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19. A system as described in claim 1, further comprising a memory device for storing the address prior to transmission by the second transmitter.

20. A system as described in claim 19, wherein the memory device is at least one selected from the group consisting of: compact disc, digital versatile disc, magnetic tape, computer hard drive, random access memory, read only memory, CD ROM, a server, a magnetic data storage medium, and an optical data storage medium.

21. A system as described in claim 1, wherein the online information source is an Internet service provider.

22. A system as described in claim 1, wherein the online information source comprises one selected from the group consisting of: an intranet, the Internet, a public network, and a private network.

23. A system as described in claim 1, wherein the online content comprises content in a form selected from the group consisting of: text, graphics, video, data, audio, animation, video stills, slow frame video, and multimedia.

24. A system as described in claim 1, wherein the program is a sports program.

25. A system as described in claim 1, wherein the program is an advertisement.

26. A system as described in claim 1, wherein the online content is an

advertisement.

27. A system as described in claim 1, wherein the program is a motion picture program.

28. A system as described in claim 1, wherein the program is a game show program.

29. A system as described in claim 1, wherein the program is a video program.

30. A system as described in claim 1, wherein the program is a live program.

31. A system as described in claim 1, wherein the program is an audio program.

32. A system as described in claim 1, wherein the program is a music video program.

33. A system as described in claim 1, wherein the program is a news program.

34. A system as described in claim 1, wherein the programming signal is in digital format.

35. A system as described in claim 1, wherein the programming signal is in analog format.

36. A system as described in claim 19, wherein multiple addresses are stored in a link file in a memory device.

37. A system as described in claim 36, wherein the link file is transmitted to the user by the second transmitter.

38. A system as described in claim 1, wherein the address is selected based on a profile of a collection of users.

39. A system as described in claim 1, wherein the online content relates to a sitcom program.

40. A system as described in claim 1, wherein the online content relates to an interactive game show program.

41. A system as described in claim 1, wherein the online content is stored in one selected from the group consisting of: magnetic tape, compact disc, digital versatile disc, computer hard drive, random access memory, read only memory, CD ROM, a magnetic data storage medium, and an optical data storage medium.

42. A system as described in claim 1, wherein the online content relates to a polling question.

43. A system as described in claim 32, wherein the online content contains

additional information related to the music video program selected from the group consisting of biographical information on an artist, concert schedule, and information on buying goods related to the artist.

5 44. A system as described in claim 1, wherein the online content contains a query for the user to respond to a poll.

45. A system as described in claim 1, wherein the online content is selected based, at least in part, on a user profile.

46. A system as described in claim 1, wherein the program is selected based, at least in part, on a user profile.

10 47. A system as described in claim 46, wherein the user profile is stored in a storage device at one of the locations selected from the group consisting of: a user station, a personal computer, a cable head-end, a cable box, a satellite receiver, an intranet site, an Internet site, and a satellite operations center.

15 48. A system as described in claim 1, wherein the address relates to a polling question.

49. A system as described in claim 1, further comprising a data management storage device, wherein information about the user is stored in the data management device.

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50. A system as described in claim 49, wherein an analysis is performed on the user information.

51. A system as described in claim 49, wherein the user information contains user clicks made by the user on a user interface while using an online service provider.

5 52. A system as described in claim 49, wherein information about a plurality of users is stored in the data management storage device.

53. A system as described in claim 49, wherein the user information contains information selected from the group consisting of: the geographic location of the user, clicks made by the user on a user interface while using an on line service provider, user viewing habits, and demographics of the user.

54. A system as described in claim 49, wherein the program is selected, at least in part, based on the user information.

55. A system as described in claim 49, wherein the data management storage device is located at a location selected from the group consisting of: a user station, a personal computer, a cable head-end, a cable box, a satellite receiver, an intranet site, a public network, a private network, and an Internet site.

56. A system as described in claim 49, wherein the program contains a predetermined advertisement and wherein selection of the predetermined advertisement is

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based, at least in part, on the user information.

57. A system as described in claim 49, wherein the online content is based, at least in part, on the user information.

58. A system as described in claim 49, wherein the address is selected, at least in part, based on the user information.

59. A system as described in claim 49, wherein the online content contains an advertisement and wherein the advertisement is selected, at least in part, based on the user information.

60. A system as described in claim 49, wherein the programming signal contains a graphics segment and wherein the graphics segment is selected, at least in part, based on the user information.

~~61.~~ A method for providing a programming signal containing a program and at least one address identifying online content relating to the program from an online information source, the method comprising the steps of:

transmitting the program to a user site; and

providing the address to the user site,

wherein, at some time after receipt of the address at the user site, the online content is automatically retrieved and presented to a user at the user site in conjunction with the program.

62. A method as described in claim 61, wherein the transmitting step and the providing step originate from the same location.

63. A method as described in claim 62, wherein the transmitting step and the providing step occur at a Web hosting site.

5 64. A method as described in claim 61, wherein the transmitting step and the providing step originate from different locations.

65. A method as described in claim 64, wherein the providing step occurs at a Web hosting site.

66. A method as described in claim 61, wherein the address providing step occurs during the program transmitting step.

67. A method as described in claim 61, wherein the address providing step occurs prior to the program transmitting step.

68. A method as described in claim 61, wherein the address providing step occurs at a predetermined time during the program transmitting step.

15 69. A method as described in claim 61, wherein the address providing step further comprises the step of providing a plurality of addresses.

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70. A method as described in claim 69, wherein each of the plurality of addresses are transmitted at certain predetermined times during the program.

71. A method as described in claim 61, wherein the program transmitting step occurs at one of the sites selected from the group consisting of: a cable head-end, a program operations center, a satellite operations center, an Internet site, an intranet site, a private network site, and a public network site.

72. A method as described in claim 61, wherein the address providing step occurs at one of the sites selected from the group consisting of: a cable head-end, a program operations center, a satellite operations center, an Internet site, an intranet site, a private network site, and a public network site.

73. A method as described in claim 61, wherein the transmitting step is performed via at least one transmission medium selected from the group consisting of: the Internet, an intranet, terrestrial broadcast, cable, satellite broadcast, fiber optics, a telephone circuit, a wireless connection, a private network, and a public network.

74. A method as described in claim 61, wherein the program is a previously recorded program and further comprising the step of storing the program on a recording medium.

75. A method as described in claim 74, wherein the recording medium is at least one selected from the group consisting of: VHS tape, compact disc, digital versatile disc,

magnetic tape, computer hard drive, random access memory, read only memory, CD ROM, a magnetic data storage medium, and an optical data storage medium.

76. A method as described in claim m 61, wherein the program is transmitted as a live event.

5 77. A method as described in claim 61, wherein the program comprises at least one form selected from the group consisting of: audio, video, data, graphics, animation, text, video stills, slow frame video, and multimedia.

78. A method as described in claim 61, wherein the address is an Internet URL, the URL identifying the online information source which is an Internet site.

10 79. A method as described in claim 61, further comprising the step of storing the address in a memory device prior to providing the address.

15 80. A method as described in claim 79, wherein the memory device is at least one selected from the group consisting of: compact disc, digital versatile disc, magnetic tape, computer hard drive, random access memory, read only memory, CD ROM, a server, a magnetic data storage medium, and an optical data storage medium.

81. A method as described in claim 61, wherein the online information source is an Internet service provider.

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82. A method as described in claim 61, wherein the online information source comprises one selected from the group consisting of: an intranet, the Internet, a public network, and a private network.

5 83. A method as described in claim 61, wherein the online content comprises content in a form selected from the group consisting of: text, graphics, video, data, audio, animation, video stills, slow frame video, and multimedia.

84. A method as described in claim 61, wherein the program is a sports program.

85. A method as described in claim 61, wherein the program is an advertisement.

10 86. A method as described in claim 61, wherein the online content is an advertisement.

87. A method as described in claim 61, wherein the program is a motion picture program.

88. A method as described in claim 61, wherein the program is a game show program.

15 89. A method as described in claim 61, wherein the program is a video program.

90. A method as described in claim 61, wherein the program is a live program.

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91. A method as described in claim 61, wherein the program is an audio program.

92. A method as described in claim 61, wherein the program is a music video program.

93. A method as described in claim 61, wherein the program is a news program.

94. A method as described in claim 61, wherein the programming signal is in digital format.

95. A method as described in claim 61, wherein the programming signal is in analog format.

96. A method as described in claim 79, further comprising the step of storing multiple addresses in a link file in the memory device, wherein the storing step occurs prior to the providing step.

97. A method as described in claim 96, wherein the link file is provided to the user site.

98. A method as described in claim 61, further comprising the step of selecting the address based on a user profile.

99. A method as described in claim 61, further comprising the step of selecting the

address based on the profile of a collection of users.

100. A method as described in claim 61, wherein the online content relates to a sitcom program.

101. A method as described in claim 61, wherein the online content relates to an interactive game show program.

102. A method as described in claim 61, wherein the online content is stored in a storage device selected from the group consisting of: magnetic tape, compact disc, digital versatile disc, computer hard drive, random access memory, read only memory, CD ROM, a magnetic data storage medium, and an optical data storage medium.

103. A method as described in claim 61, wherein the online content relates to a polling question.

104. A method as described in claim 92, wherein the online content contains additional information related to the music video program selected from the group consisting of biographical information on an artist, concert schedule, and information on buying goods related to the artist.

105. A method as described in claim 61, wherein the online content contains a query for the user to respond to a poll.

106. A method as described in claim 61, wherein the online content is selected based, at least in part, on a user profile.

107. A method as described in claim 61, wherein the program is selected based, at least in part, on a user profile.

5 108. The method of claim 107, wherein the user profile is stored in a storage device at one of the locations selected from the group consisting of: a user station, a personal computer, a cable head-end, a cable box, a satellite receiver, an intranet site, an Internet site, and a satellite operations center.

10 109. A method as described in claim 61, wherein the address relates to a polling question.

110. An apparatus for encoding at least one address into a programming signal wherein the address identifies an Internet information segment at an Internet site, the segment related to a program provided in the programming signal, the apparatus comprising;

an input for receiving a programming signal;

15 an encoder for embedding the address into the programming signal, the address identifying the Internet site containing the Internet information segment; and

an output port for outputting a programming signal which includes the embedded address,

20 wherein the encoder inserts the address into the programming signal such that Internet information is automatically pushed to a user system at some time after reception and

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extraction of the address from the programming signal by the user system.

~~111.~~ A method, for embedding an address into a programming signal, wherein the address identifies an Internet source of an online information segment which is associated with the programming signal, the method comprising:

5 generating the programming signal;

 obtaining at least one address identifying the Internet source of the online information segment associated with the programming signal;

 determining when the content in the programming signal is to be presented to a user relative to a fixed reference frame; and

10 embedding the address into a location within the programming signal based upon the determination of when the content is to be presented,

whereby the online information segment is automatically pushed to the user upon the user receiving the programming signal and extracting the address from the programming signal.

~~112.~~ A system for designating, in a database accessible via the Internet, a link file identifying an online information segment obtained from an online information source identified by an address which is associated with a programming signal, comprising:

15 a browser for establishing a communications connection with a network database;

 a means for entering the address into the link file provided in the network database;

 a means for designating in the link file the programming signal to which the address

20 relates; and

 a user interface for interacting with the network database.

113. The system of claim 112, wherein the system further comprises:

an Internet Web hosting site further comprising:

a network database;

a means for accessing the network database; and

a means for saving the link file in the network database.

114 The system of claim 113, wherein the means for saving the link file further comprises a means for saving user clicks on a user interface in a database.

~~115.~~ A system for transmitting video programming and at least one address useable for retrieving from at least one server on a network on-line information segments having content related to the video programming, comprising:

a broadcast system for sending to a viewer a signal carrying video programming for viewing by the viewer; and

an address server on the network for sending in respective specified timing relationship with the video programming the at least one address over the network to the viewer,

wherein the on-line information segments retrieved over the network from the at least one server using the at least one address are viewable by the viewer in a predetermined timing relationship with the viewing of the video programming.

116. A system as described in claim 115, wherein the address server sends each one of the at least one address with an associated time indicia for controlling when each one of the at least one address are to be used to retrieve respective ones of the on-line information

segments so as to be viewable by the viewer in respective predetermined timing relationship with the viewing of the video programming.

117. A system as described in claim 115, wherein the network comprises the Internet; the at least one server comprises at least one Internet web site; the at least one address comprises at least one uniform resource locator; and the on-line information segments
5 comprise at least one web page retrievable from the at least one Internet web site using the at least one uniform resource locator.

118. A system as described in claim 115, wherein the video programming comprises educational subject matter.

119. A system as described in claim 115, wherein the video programming
10 comprises entertainment subject matter.

120. A system as described in claim 115, wherein the video programming comprises advertising subject matter.

121. A system as described in claim 115, wherein the online information segments
15 include a request for viewer response and wherein the network has a two-way capability enabling the viewer to enter information in response to the request included in the on-line information segments.

122. A system as described in claim 117, wherein the network is the Internet, and

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the at least one web page includes a request for viewer response and enables the viewer to enter information in response to the request included in the at least one web page.

123. A system as described in claim 121, wherein the request for viewer response is related to advertising subject matter of the video programming.

124. A system as described in claim 121, wherein the request for viewer response comprises an offer to sell a product or service, and the viewer is enabled to enter response information making a purchase of the product or the service.

125. A system as described in claim 115 1, further comprising a computer on the network for creating at least certain ones of the on-line information segments retrievable from respective ones of the at least one server and storing the created on-line information segments at the respective ones of the at least one server, wherein at least one address for retrieving the created on-line information segments is provided to the address server for sending to the viewer in respective specified timing relationship with the video programming.

126. A system as described in claim 115, wherein the broadcast system is a television transmission system, and the signal is a television signal.

127. A system as described in claim 126 wherein the television signal is analog.

128. A system as described in claim 126, wherein the television signal is digital.

129. A system as described in claim 115, wherein the broadcast system is selected from a group consisting of a terrestrial broadcast system, a satellite broadcast system, a cable distribution system, a fiberoptic distribution system, the Internet, a private network, and a public network.

130. A method for transmitting video programming and at least one address useable for retrieving over a network from at least one server on the network on-line visual information segments having content related to the video programming to a viewer, comprising the steps of:

broadcasting a signal carrying the video programming to a viewer for viewing; and

sending to the viewer over the network in respective specified timing relationship with the video programming the at least one address for retrieving the on-line information segments from the at least one server,

wherein the on-line information segments are viewable by the viewer in respective predetermined timing relationship with the viewing of the video programming.

131. A method as described in claim 130, wherein the step of sending the at least one address comprises sending each one of the at least one address with an associated time indicia for controlling when each one of the at least one address is to be used for retrieval of respective ones of the on-line information segments so that the on-line information segments are viewable by the viewer in respective predetermined timing relationship with the viewing of the video programming.

132. A method as described in claim 130, further comprising the step of creating at

least certain ones of the on-line information segments retrievable from respective ones of the at least one server, and wherein at least one address sent to the viewer in respective specified timing relationship with the video programming is for retrieving the created on-line information segments.

5 133. A method as described in claim 130, wherein the network comprises the Internet, the at least one address comprises at least one uniform resource locator, the at least one network server comprises at least one Internet web site, and the on-line information segments comprise at least one web page retrievable over the Internet from respective ones of the at least one Internet web site using the at least one uniform resource locator.

10 134. A method as described in claim 130, wherein the video programming comprises educational subject matter.

 135. A method as described in claim 130, wherein the video programming comprises entertainment subject matter.

15 136. A method as described in claim 130, wherein the video programming comprises advertising subject matter.

 137. A method as described in claim 130, wherein the on-line information segments include a request for viewer response and wherein the network has a two-way capability enabling the viewer to enter information in response to the request included in the on-line information segments.

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138. A method as described in claim 137, wherein the request for viewer response is related to advertising subject matter of the video programming.

139. A method as described in claim 137, wherein the request for viewer response comprises an offer to sell a product or service and the viewer is enabled to enter response information making a purchase of the product or the service.

140. A method as described in claim 130, wherein the step of broadcasting a signal is selected from a group consisting of: terrestrial broadcasting, satellite broadcasting, distributing the signal by cable, distributing the signal by optical fiber, distributing the signal via the Internet, distributing the signal via a private network, and distributing the signal via a public network.

141. A system for transmitting video programming and at least one address useable for retrieving over a network from at least one server on the network on-line information segments having content related to the video programming, comprising:

an address source for providing the at least one address; and

a broadcast system for sending a signal carrying the video programming to a viewer, the broadcast system being responsive to the address source for encoding the signal to carry the at least one address in respective specified timing relationship with the video programming,

wherein the at least one address encoded in the signal may be extracted by a decoder from the signal, and the signal is provided to a receiver for presenting the video programming, and wherein the at least one address extracted from the signal may be used by a processor coupled

to the network to retrieve over the network the on-line information segments from the at least one server for viewing in respective predetermined timing relationship with the video programming.

142. A system as described in claim 141, wherein each one of the at least one address encoded by the broadcast system to be carried by the signal includes an associated time indicia for controlling when each one of the at least one address is to be used for retrieving respective ones of the on-line information segments so that the on-line information segments are retrieved for viewing in respective predetermined timing relationship with the video programming.

143. A system as described in claim 141, wherein the network is the Internet; the at least one address comprises at least one uniform resource locator; the at least one server comprises at least one Internet web site; and the on-line information segments comprise at least one web page retrievable from the at least one Internet web site using the at least one uniform resource locator.

144. A system as described in claim 141, wherein the decoder is located in proximity to the receiver and the processor.

145. A system as described in claim 141, wherein the decoder is located remotely from the receiver and the processor, and the at least one address extracted from the encoded signal is provided to the processor over the network.

146. A system as described in claim 141, wherein the broadcast system further comprises an encoder responsive to the address source for encoding the signal to carry the at least one address in respective specified timing relationship with the video programming.

5 147. A system as described in claim 142, wherein the broadcast system further comprises an encoder responsive to the address source for encoding the signal with the at least one uniform resource locator in respective specified timing relationship with the video programming.

148. A system as described in claim 141, wherein the video programming comprises entertainment subject matter.

10 149. A system as described in claim 141, wherein the video programming comprises educational subject matter.

150. A system as described in claim 141, wherein the video programming comprises advertising subject matter.

15 151. A system as described in claim 141, further comprising a computer on the network for creating at least certain ones of the on-line information segments retrievable from respective ones of the at least one server and storing the created on-line information segments at respective ones of the at least one server, wherein at least one address for retrieving the created on-line information segments is provided to the address source and encoded in the signal transmitted to the viewer in respective specified timing relationship with the video

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programming.

152. A system as described in claim 141, wherein the broadcast system is a television transmission system, and the signal is a television signal.

153. A system as described in claim 152, wherein the television signal is analog.

154. A system as described in claim 152, wherein the television signal is digital.

155. A system as described in claim 141, wherein the broadcast system is selected from a group consisting of a terrestrial broadcast system, a satellite broadcast system, a cable distribution system, a fiberoptic distribution system, the Internet, a private network and a public network.

~~156.~~ A system for transmitting to users video programming and at least one address useable for retrieving over a network from at least one network server on the network on-line information segments having content related to the video programming, comprising:

a broadcast system for sending a signal carrying the video programming to a viewer, the signal further carrying the at least one address encoded therein in respective specified timing relationship with the video programming,

wherein the at least one address encoded in the signal may be extracted by a decoder from the signal, and the signal is provided to a receiver for presentation of the video programming, and wherein the at least one address extracted from the signal may be used by a processor coupled to the network to retrieve over the network the on-line information

segments from the at least one server for displaying in respective predetermined timing relationship with the presentation of the video programming.

157. A system as described in claim 156, wherein each of the at least one address encoded by the broadcast system to be carried by the signal includes an associated time indicia controlling when each one of the at least one address is to be used to retrieve respective ones of the on-line information segments for display in respective predetermined timing relationship with the presentation of the video programming.

158. A system as described in claim 156, wherein the network is the Internet; the at least one address comprises at least one uniform resource locator; the at least one server comprises at least one Internet web site; and the on-line information segments comprise at least one web page retrievable from the at least one Internet web site using the at least one uniform resource locator.

159. A system as described in claim 156, wherein the decoder is located in proximity to the receiver and the processor.

160. A system as described in claim 156, wherein the decoder is located remotely from the receiver and the processor, and the at least one address extracted from the encoded signal is provided to the processor over the network.

161. A system as described in claim 156, wherein the broadcast system further comprises an encoder for encoding the signal to carry the at least one address in respective

specified timing relationship with the video programming.

162. A system as described in claim 157, wherein the broadcast system further comprises an encoder for encoding the signal with the at least one uniform resource locator in respective specified timing relationship with the video programming.

5 163. A system as described in claim 156, wherein the video programming comprises entertainment subject matter.

164. A system as described in claim 156, wherein the video programming comprises educational subject matter.

10 165. A system as described in claim 156, wherein the video programming comprises advertising subject matter.

15 166. A system as described in claim 156, further comprising a computer on the network for creating at least certain ones of the on-line information segments retrievable from respective ones of the at least one server and storing the created on-line information segments at respective ones of the at least one server, wherein at least one address for retrieving the created on-line information segments is encoded in the signal transmitted to the viewer in respective specified timing relationship with the video programming.

167. A system as described in claim 156, wherein the broadcast system is a television transmission system, and the signal is a television signal.

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168. A system as described in claim 166, wherein the television signal is analog.

169. A system as described in claim 166, wherein the television signal is digital.

170. A system as described in claim 156, wherein the broadcast system is selected from a group consisting of a terrestrial broadcast system, a satellite broadcast system, a cable distribution system, a fiberoptic distribution system, the Internet, a private network and a public network.

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